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State of Utah
DEPARTMENT OF NATURAL RESOURCES

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Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

March 8, 2010

Wayne McCandless
Nielson Construction
PO Box 620
Huntington, Utah 84528

Subject: Initial Review of Notice of Intention to Commence Large Mining Operations, Nielson Construction, Emma Park Pit, M/049/0052, Utah County, Utah

Dear Mr. McCandless:

The Division has completed a review of your Notice of Intention to Commence Large Mining Operations for the Emma Park Pit, which was received December 7, 2009. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please address only those items requested in the attached technical review by sending replacement pages for the original mining notice using **redline and strikeout** text, so we can see what changes have been made. After the notice is determined technically complete and we are prepared to issue final approval, we will ask that you send us two clean copies of the complete and corrected plan. Upon final approval of the permit, we will return one copy stamped "approved" for your records.

The Division will suspend further review of the Notice of Intention until your response to this letter is received. If you have any questions in this regard or desire to set up a meeting to discuss this review, please contact me at 801-538-5261 or Lynn Kunzler at 801-538-5310. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB:lk:vs
Attachment: Review
cc: John Blake, SITLA (jblake@utah.gov)
P:\GROUPS\MINERALS\WP\M049-Utah\S0490052-NielsonLimestone (EmmaParkPit)\final\REV1-3279-02022010.doc

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UTAH DNR OIL, GAS & MINING

INITIAL REVIEW OF NOTICEOF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Nielson Construction Company
Emma Park Pit
M/049/0052
March 8, 2010

R647-4-105 - Maps, Drawings & Photographs

General Map Comments

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
1	Exhibits 1, 2, 3, 4, 10, 13, 14	All maps need to have a legend, north arrow, scale, and legal description (township, range, section), and show the proposed disturbed area (permitted and bonded area). Maps need to be of sufficient scale to show details. A general location map needs to be provided (suggested scale of 1-inch = 1000-ft). Detail maps showing operations/facilities, reclamation, treatments, hydrology, etc. should be drawn at a scale of 1-in.= 200ft. Current maps do not all show the same permit/disturbed areas, mineral rights area (in fact much of the current disturbance is outside the current mineral rights area).	JR LK TM	

105.2 - Surface facilities map

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
2	Omission	Provide a map(s) that shows location of existing facilities (i.e. crushers, scales, office, stockpiles for overburden/waste materials, topsoil, etc), access and haul roads, pads, pits, highwalls, hydrology control structures, areas where slope stability analyses are done, the pit location and areas of future expansion, etc. Structures need to be described (in text) and identified (on the map)	LK	

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
3	Omission	Please provide long section cross sections of the areas to be mined. Include pre-mine, post-mining, and reclaimed surfaces. Provide a long section and a typical cross section of the access road.	JR	
4	Omission	The soils map (exhibit 13) needs to show the mine location. Currently it is difficult to relate this map to other maps due to it being nearly black.	LK	
5	Omission	The reclamation treatments map (exhibit 4) does not show any treatments – is it to be assumed that the entire area will be treated the same for reclamation, including highwall and slope regrading, soil replacement, seedbed preparation and seeding techniques? Will there be any post-reclamation water control structures?	LK	
6	Omission	Provide a map that shows the land/mineral ownership of the proposed disturbed area and adjacent areas.	LK	

106.3 - Estimated acreages disturbed, reclaimed, annually

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
7	Omission	Provide an estimate of the acreage that will be disturbed and the acreage that will be reclaimed on an annual basis. Identify the approximate time (i.e. year 1, 2, etc.) that reclamation work will begin.	LK	

106.5 - Existing soil types, location, amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
8	Page 8, and exhibit 13	The soils map is difficult to read (nearly black), does not show the proposed mining area, township, range, section, north arrow, etc. From the soils description, there is expected to be significantly more soil material than the proposed 5,000 cy that is proposed to be salvaged. The soil test pits and data indicate that, on average, there is in excess of 10 inches of soil that could (and should) be salvaged. Over the 32 acres of total disturbance, this would provide approximately 42,700 cy of soil that should be salvaged for reclamation. (note, the reclamation plan indicates that you intend to replace 12 inches of soil, or 51,200 cy). Please show where this material will be stockpiled. Comments that you will screen the topsoil from the limestone and return it directly to the pit floor does not account for the disposition of the soil between when the quarrying begins and when the limestone has been removed, thus allowing for the soil to be replaced.	LK	

106.6 - Plan for protecting & re-depositing soils

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
9	Omission	Please describe how soil stockpiles will be protected from further impacts (i.e. erosion, equipment, etc.) and how they will be re-deposited. Note, it is usually preferred to have several smaller stockpiles scattered throughout the area, than to have one large stockpile. Stock piles should be seeded with a quick-establishing vegetation cover, bermed, and signed. Refer also to comments under 106.5.	LK	

106.7 - Existing vegetation - species and amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
10	Page 10	The Division appreciates the fact that it was too late in the season to acquire accurate vegetation data and looks forward to receiving site specific date by the summer of 2010. This data will be used to verify the assumptions made in your current NOI. No further response is needed at this time for vegetation information.	LK	

106.8 - Depth to groundwater, extent of overburden, geology

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
11	Page 11	The geology narrative 106.8 is incorrect. The rocks in the area are the Flagstaff Limestone (Paleocene) and North Horn Formation (Paleocene and Upper Cretaceous). The Lodgepole Limestone and Hyrum Dolomite are in Northern Utah. Include a geological map of the mine and surrounding area with scale, linear scale, township and range, north orientation. Include geological structures, and a cross section across the mine area.	JR	

R647-4-109 - Impact Assessment

109.1 - Impacts to surface & groundwater systems

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
12		The plan discusses impacts to ground water as not being affected, but fails to discuss impacts to surface water runoff. The one figure shows a check dam along the access road. It also shows berms at the lower end of disturbance. Please provide better quality drawings that show the designs of the berms and check dam. Check dams should be made out of 6-24 inch rock with a low point in the middle to prevent water from going around them. Berms should be designed to drain to a low point where sediment and rock fines could settle. Better figures would hopefully be able to show this as well as text being added to the plan describing in better detail the sediment control plans for the expanded pit.	TM	

109.3 - Impacts on existing soils resources

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
13	Page 15	Please explain how screening the limestone (from the soil) and returning the removed topsoil directly to the pit floor will minimize impacts to the soil resources and provide soil of similar quality as presently exists. Soil resources will be within the top foot or two of the surface. How can the 'screened' soil be returned directly to the pit floor when there is 10-25 feet of limestone that will be quarried? See also comments under 106.5.	LK	

R647-4-110 - Reclamation Plan

110.1 - Current & post mining land use

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
14	Page 16-17	Page 14 of the NOI indicates that the area provides year-round habitat for mule deer, pronghorn, elk and moose, yet there is no reference to wildlife habitat as current or post-mining land use. Wildlife habitat needs to be included in the land use.	LK	

110.2 - Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
15	Page 18, para 4	This should read 'reclaimed with 3H:1V *maximum* slope' rather than 'minimum slope.'	LK	

110.5 - Revegetation planting program

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
16	Page 20 Part a	Refer to previous comments regarding soil issues and replacement, showing the location of stock piles, etc.	LK	
17	Part b	With regards to seedbed preparation, please change current proposed plan. After topsoil (and amendments) have been mixed and re-applied, rather than tracking with a dozer, it is preferred to rip the area parallel to the contour at a minimum depth of 18 inches, and leave the surface rough. This action reduces the potential for capillary barriers and slippage planes between the topsoil and underlying material, promotes water infiltration and retention, and discourages the use of ATV's, all of which improve the re-establishment of desirable vegetation.	LK	
18	Page 21 Part c	It is unlikely that use of the proposed seed mix will provide for a permanent, diverse vegetation community capable of meeting the post-mining land use needs. Attached to this review is a recommended seed mix that was designed for this situation. Please include this mix in your NOI, or develop a seed mix that includes 3-4 grass species, 3-4 forb species and 3-4 shrub species that will meet revegetation standards. A total of 10-12 species should be used.	LK	
19	Page 21 Part d	The NOI identifies drill seeding for the quarry floor, roads on flat or gently sloping surfaces, and the scale house. How will seeding be done on the rest of the area? Areas that will be seeded using different methods need to be identified on the reclamation map (Exhibit 4). Given the relatively small areas that will be reclaimed at any one time, and that the use of a drill tends to smooth out the surface, it is recommended that the entire area be broadcast seeded (either with a tractor, ATV-mounted broadcasters, or with hand broadcasters). Timing of the reclamation work should be such that topsoil replacement and surface ripping is completed during the late fall (mid October) and seeding commences immediately thereafter. By broadcasting the seed on the freshly ripped surface, seed is naturally 'planted' or covered as the soil surface settles, thus eliminating the need to rake or harrow afterwards (which also tends to smooth out the surface and reduces the benefit of a rough surface for vegetation establishment).	LK	

R647-4-112 - Variance

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
20	Page 22	Under the variance section comments are made regarding soil materials. Is this supposed to be a variance request? If so, please provide the necessary write-up for a variance request. This would include citing the rule for which the variance is being requested, a description of the specific variance being requested and identifying the area to which the requested variance will apply, justification (rationale) for needing the variance, and a description of the alternate methodology or plans that will be utilized in the variance area that would demonstrate that it meets the intent of the rule and Act. None of this information was provided, so no variance can be approved at this time.	LK	

R647-4-113 – Surety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
21	Page 23	Reclamation surety cost estimates must be developed using 3rd-party costs with the reclamation being overseen by the Division. Costs must be verifiable, which requires areas (acreage), volumes, and unit costs for each step in the reclamation process. The Division will provide an Excel Spreadsheet with current tasks and unit costs for typical reclamation tasks and current unit costs for each task. Since the projected life of mine is only 5 years, the normal time for which the Division calculates and escalates bonds, it will consider the entire site as being disturbed and needing reclamation. Until more detail of the reclamation plan is provided, the Division cannot determine or verify the cost estimate.	LK	